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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/748,310	12/26/2000	Robert Chandler	M894.312-6	4417

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EXAMINER

ZIMMERMAN, GLENN

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 04/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/748,310

Applicant(s)

CHANDLER ET AL.

Examiner

Glenn Zimmerman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: _____

DETAILED ACTION

Specification

The use of the trademark Genura and Xydar has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

The disclosure is objected to because of the following informalities: On page 22 line 7, the examiner suggests changing "(8,9,8,9)" to "(8,9)", as the current seems redundant. On page 5 line 22, the examiner suggests changing "384,3" to "384.3".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 10, 12, 15 and 18 are rejected for inconsistency between claim and specification disclosure MPEP 2173.03. These claims use the wording "driver circuit in the envelope" where the specification discloses that the driver circuit is in the lamp or in a region of an enclosure.

Claim 8 uses the wording "can be" which is vague and indefinite.

Claim 10 is rejected for inconsistency between claim and specification disclosure. The claim writes that the restriction means is in the envelope, but the restriction means is not described in the envelope in the specification or drawings, but rather shown below the envelope or in the lamp.

Claim 12 is rejected for inconsistency between claim and specification disclosure. The claim uses the wording "configuration" and the specification uses the wording "reconfiguration".

Claim 13 is rejected for inconsistency between claim and specification disclosure. The claim uses the wording "configuration" and the specification uses the wording "reconfiguration".

Claim 19 uses the wording "suitable", which is -able language and is indefinite.

A 112 2nd paragraph rejection has been determined for claims 1, 10, 12, 15 and 18, as written about above. However, a further evaluation of the claim will be done while interpreting "driver circuit in the envelope" as "driver circuit in the lamp".

A 112 2nd paragraph rejection has been determined for claim 8, as written about above. However, a further evaluation of the claim will be done while interpreting "can be" as "is".

A 112 2nd paragraph rejection has been determined for claim 10, as written about above. However, a further evaluation of the claim will be done while interpreting "a restriction means in the envelope" as "a restriction means in the lamp".

A 112 2nd paragraph rejection has been determined for claim 12, as written about above. However, a further evaluation of the claim will be done while interpreting "configuration means" as "reconfiguration means".

A 112 2nd paragraph rejection has been determined for claim 13, as written about above. However, a further evaluation of the claim will be done while interpreting "configuration means" as "reconfiguration means".

A 112 2nd paragraph rejection has been determined for claim 19, as written about above. However, a further evaluation of the claim will be done while interpreting "suitable" as "".

Claims 2-9, 11, 13, 14, 16, 17 and 20-24 are rejected for depending from a rejected claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10, 11 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Postma et al. U.S. Patent 4,661,746.

Regarding claim 10, Postma disclose an electrodeless lamp, comprising: an envelope (**lamp vessel Fig. 2 ref. 1**) containing a discharge gas (**abstract**); a magnetic material core (**ferrite cylindrical core ref. 2**) in the envelope; an induction coil (**winding ref. 4**) wound around the magnetic material core; a driver circuit (**col. 2 lines 64-65**) in the lamp for supplying an oscillatory electric current to the induction coil to operate the electrodeless lamp; and a restriction means (**glass wool layer ref. 14**) in the envelope for limiting the amount of heat generated in the magnetic material core being transmitted to the driver circuit. Glass wool has a thermal conductivity of ($k=4.2 \times 10^{-2}$ W/m.degree.k.). MPEP 2183.

Regarding claim 11, Postma disclose an electrodeless lamp according to claim 10 wherein the restriction means is formed of a material having a thermal conductivity of 0.4 W/m*K or less.

Regarding claim 18, Postma et al. disclose an electrodeless lamp (**title**), comprising: an envelope (**lamp vessel Fig. 2 ref. 1**) containing a discharge gas (**abstract**); a magnetic material core (**ferrite cylindrical core ref. 2**) in the envelope having a hollow portion; an induction coil (**winding ref. 4**) wound around the magnetic material core; a driver circuit (**col. 2 lines 64-65**) in the lamp for supplying an oscillatory electric current to the induction coil to operate the electrodeless lamp; and

A heat conduction means thermally coupled to the magnetic material core for conducting heat generated in the magnetic material core to the outside of the

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electrodeless lamp wherein: the heat conduction means includes a tube (**tubular body ref. 11**) thermally coupled to the magnetic core having one end of the tube positioned inside (**Fig. 2 no ref. #**) the hollow portion of the magnetic material core.

Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Eggink et al. U.S. Patent 5,006,752.

Regarding claim 18, Eggink et al. disclose an electrodeless lamp (**title**), comprising: an envelope (**spherical glass discharge vessel ref. 1**) containing a discharge gas (**col. 2 line 55**); a magnetic material core (**cylindrical ferrite core ref. 3**) in the envelope having a hollow portion; an induction coil (**metal wire windings ref. 5**) wound around the magnetic material core; a driver circuit (**high-frequency electric power supply ref. 6**) in the lamp for supplying an oscillatory electric current to the induction coil to operate the electrodeless lamp; and

A heat conduction means thermally coupled to the magnetic material core for conducting heat generated in the magnetic material core to the outside of the electrodeless lamp wherein: the heat conduction means includes a tube (**heat pipe ref. 7**) thermally coupled to the magnetic core having one end of the tube positioned inside (**col. 3 lines 2-8**) the hollow portion of the magnetic material core.

Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Friederichs et al. U.S. Patent 5,130,912.

Regarding claim 18, Friederichs et al. disclose an electrodeless lamp (**title**), comprising: an envelope (**discharge vessel Fig. 1 ref. 1**) containing a discharge gas (**col. 2 line 68**); a magnetic material core (**magnetic material core ref. 6**) in the

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envelope having a hollow portion; an induction coil (**electric coil ref. 4**) wound around the magnetic material core; a driver circuit (**high frequency electric supply ref. 30**) in the lamp for supplying an oscillatory electric current to the induction coil to operate the electrodeless lamp; and

A heat conduction means thermally coupled to the magnetic material core for conducting heat generated in the magnetic material core to the outside of the electrodeless lamp wherein: the heat conduction means includes a tube (**copper closed tubular container ref. 24**) thermally coupled to the magnetic core having one end of the tube positioned inside (**Fig. 1 no ref. #**) the hollow portion of the magnetic material core.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 2 and 5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 or 10 of U.S.

Patent No. 6,433,478. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims identicalness would have been obvious to a person having ordinary skill in the art.

Claims 12-17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 6,433,478. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims identicalness would have been obvious to a person having ordinary skill in the art.

Claims 18-24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 10 or 14 of U.S. Patent No. 6,433,478. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims identicalness would have been obvious to a person having ordinary skill in the art.

Claims 3, 8 and 9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 12 of Chandler et al. U.S. Patent No. 6,433,478 in view of Postma et al. U.S. Patent 4,661,746.

Regarding claim 3, Chandler et al. teach all the limitations of claim 3, but fail to teach a core. Postma et al. in the analogous art teach a core (**ferrite cylindrical core ref. 2**). Additionally, Postma et al. teach incorporation of such a core to improve dissipating of heat through a copper tube (**col. 3 lines 6-8**) and for producing an electrical field in the lamp vessel during operation (**col. 1 lines 10-11**).

Consequently it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a core in the ferrite unit of Chandler et al. since such a modification would improve dissipating of heat and for producing an electrical field in the lamp vessel during operation as taught by Postma et al.

Regarding claims 8 and 9, Chandler et al. claim 12 discloses all of the limitations.

Claims 4 and 5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of Chandler et al. U.S. Patent No. 6,433,478 in view of Postma et al. U.S. Patent 4,661,746.

Regarding claims 4 and 5, Chandler et al. teach all the limitations of claims 4 and 5, but fail to teach wherein the heat conduction material having a thermal conductivity of 20 W/m*K and an electrical resistivity of 2 ohm*m or higher. Postma et al. in the analogous art teach wherein the heat conduction material having a thermal conductivity of 20 W/m*K and an electrical resistivity of 2 ohm*m or higher (**copper tubular body ref. 11**). Additionally, Postma et al. teach incorporation of such a material to improve cooling (**col. 3 line 7**).

Consequently it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use copper in the heat conduction means of Chandler et al. since such a modification would improve heat dissipation as taught by Postma et al.

Claims 4, 5, 6 and 7 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of Chandler et al. U.S. Patent No. 6,433,478 in view of Antonis et al. U.S. Patent 5,572,083.

Regarding claims 4, 5, 6 and 7, Chandler et al. teach all the limitations of claim 5, but fails to teach. Antonis et al. in the analogous art teach a wherein the heat conduction means is formed of at least one of a metal material and a ceramic material (**col. 2 lines 25-31**). Additionally, Antonis et al. teaches incorporation of such a metal or ceramic material to improve heat conducting and is inexpensive (**col. 2 lines 25-31**).

Consequently it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a metal material or ceramic material in the cooling structure of Chandler et al. since such a modification would improve cost and heat conducting as taught by Antonis et al.


Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ramamurthi et al. U.S. Patent 5,306,555 discloses Aerogel Matrix Composites. Ramamurthi et al. disclose the thermal conductivity of glass wool. Chamberlain et al. U.S. Patent Application Publication 2002/0067129 disclose a Ferrite Core for Electrodeless Fluorescent Lamp Operating at 50-500Khz. Miyazaki et al. U.S. Patent 6,404,141 disclose an Electrodeless Discharge Lamp. Eggink et al. U.S. Patent 5,291,091 disclose an Electrodeless Low-Pressure Discharge. Van Os et al. U.S. Patent 5,598,069 disclose an Amalgam System for Electrodeless Discharge Lamp. Takekiyo et al. Japanese Patent Application JP 11025925 A disclose an Electrodeless Fluorescent Lamp. Kurachi et al. U.S. Patent Application Publication 2003/0057877 disclose an Electrodeless Discharge Lamp.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn Zimmerman whose telephone number is (703) 308-8991. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is n/a.


Glenn Zimmerman
April 18, 2003


ASHOK PATEL
PRIMARY EXAMINER